

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for disk I/O (input output) in a computer system, comprising:

upon receiving a request for said disk I/O from an application executing on the computer system, transferring a command to a disk controller, the command causing a start up of a disk drive coupled to the disk controller;

subsequent to transferring the command causing the start up and before the completion of said start up, preparing disk transaction information by packaging a plurality of data structures comprising a disk transaction in response to said command;

in response to said preparing said disk transaction information, transferring the disk transaction information to the disk controller; and

in response to said transferring said disk transaction information to said disk controller, implementing said disk I/O, wherein the disk controller uses the disk transaction information to control the disk drive.

2. (Original) The method of Claim 1, further comprising:

preparing the disk transaction information by using a processor of the computer system; and

transferring the disk transaction information from the processor to the disk controller.

3. (Original) The method of Claim 2, further comprising:
accessing a bus coupled to the disk controller to transfer the disk transaction information from the processor to the disk controller.

4. (Original) The method of Claim 3, further comprising:
accessing a bridge component controlling the bus coupled to the disk controller and transferring the disk transaction information from the processor to the disk controller via the bridge component.

5. (Original) The method of Claim 4, wherein the bridge component is a South bridge of the computer system.

6. (Previously Presented) The method of Claim 1, wherein the transferring of the command to the disk controller causing the start up of the disk drive is configured to reduce a start up latency of the disk drive.

7. (Original) The method of Claim 1, wherein the disk transaction information includes a plurality of PRD (physical region descriptor) data structures and a plurality of CPB (command parameter block) data structures for implementing the disk transaction.

8. (Currently Amended) The method of Claim 1 wherein the disk drive is compatible with a version of the ATA standard.

9. (Currently Amended) A computer readable media having computer readable code which when executed by a processor of a computer system cause the computer system to implement a bypass method for efficient disk I/O (input output), comprising:

upon receiving a request for said disk I/O from an application executing on the computer system, transferring a command to a disk controller, the command causing a start up of a disk drive coupled to the disk controller;

subsequent to transferring the command causing the start up and before the completion of said start up, preparing disk transaction information by packaging a plurality of PRD (physical region descriptor) data structures and a plurality of CPB (command parameter block) data structures comprising the disk transaction in response to said command;

accessing a bridge component controlling a bus coupled to the disk controller;

in response to said preparing said disk transaction information, transferring the disk transaction information to a plurality of bypass registers of the disk controller via the bridge component; and

in response to said transferring said disk transaction information to said disk controller, implementing said disk I/O, wherein the disk controller processes the disk transaction information to control the disk drive.

10. (Original) The computer readable media of Claim 9, wherein the bridge component is a South bridge of the computer system.

11. (Original) The computer readable media of Claim 10, further comprising:

accessing a North bridge to transfer the disk transaction information; and transferring the disk transaction information from the processor to the disk controller via the North bridge and the South bridge of the computer system.

12. (Previously Presented) The computer readable media of Claim 9, wherein the transferring of the command to the disk controller causing the start up of the disk drive is configured to hide a start up latency of the disk drive.

13. (Currently Amended) The computer readable media of Claim 9 wherein the disk drive is compatible with a version of the ATA standard.

14. (Currently Amended) A computer system for implementing a bypass method for efficient disk I/O (input output), comprising:

- a processor;
- a system memory coupled to the processor;
- a bridge component coupled to the processor; and
- a disk controller coupled to the bridge component, the disk controller including a plurality of bypass registers, wherein the processor executes software

code stored in the system memory, the software code causing the computer system to implement a method comprising:

upon receiving a request for said disk I/O from an application executing on the computer system, transferring a command from the processor to the disk controller, the command causing a start up of a disk drive coupled to the disk controller;

subsequent to transferring the command causing the start up and before the completion of said start up, preparing disk transaction information by packaging a plurality of data structures comprising the disk transaction in response to said command;

in response to said preparing said disk transaction information, transferring the disk transaction information to the bypass registers of the disk controller; and

in response to said transferring said disk transaction information to said disk controller, implementing said disk I/O, wherein the disk controller processes the disk transaction information to control the disk drive.

15. (Currently Amended) The system of Claim 14, further comprising:
preparing the disk transaction information by using said processor of the computer system; and

transferring the disk transaction information from the processor to the disk controller.

16. (Currently Amended) The system of Claim 14, wherein the disk controller is integrated within the bridge component.

17. (Original) The system of Claim 14, wherein the bridge component is a South bridge of the computer system.

18. (Previously Presented) The system of Claim 14, wherein the transferring of the command to the disk controller causing the start up of the disk drive is configured to reduce a start up latency of the disk drive.

19. (Original) The system of Claim 14, wherein the disk transaction information includes a plurality of PRD (physical region descriptor) data structures and a plurality of CPB (command parameter block) data structures for implementing the disk transaction.

20. (Currently Amended) The system of Claim 14 wherein the disk drive is compatible with a version of ~~the~~ ATA standard.

21. (Currently Amended) The system as described in Claim 20, wherein said plurality of bypass registers is operable to allow said disk controller to implement said disk transaction without writing to a register of said ATA standard.

22. (Currently Amended) The method as described in Claim 1
further comprising:

aggregating said transaction information via a memory mapped data
transfer from said processor of said computer system.

23. (Previous Presented) The method as described in Claim 1,
wherein a significant amount of start up latency of the disk drive has elapsed
when said disk transaction information is received by said disk controller.